

CLAIMS

1. Expandable microwave package for holding a food product for popping, puffing or expanding in a microwave oven comprising, in combination: a bag having an interior for holding a charge of food product to be subjected to microwave energy and having a wall including an access opening, with the bag further including a closure portion having an outer periphery of a size greater than the access opening, with the bag including a seal between the closure portion and the wall around the access opening, with the bag expanding into an expanded condition, with the seal being formed from wet seal adhesive which does not vent as the result of or during the popping, puffing or expanding of the food product in the interior of the bag.

2. The expandable microwave package of claim 1 wherein the seal is generally oval in shape and has a major axis and a minor axis, with the seal including a first, generally semicircular, portion of a diameter generally equal to the minor axis of the generally oval shape, with the seal including second and third portions extending from the first portion and generally parallel to the major axis, with the seal further including a fourth portion extending from and interconnecting the second and third portions.

3. The expandable microwave package of claim 2 wherein the fourth portion includes an arcuate portion.

4. The expandable microwave package of claim 3 wherein the fourth portion includes fifth and sixth portions extending from the second and third portions at an obtuse angle toward each other, with the fifth and sixth portions extending tangentially from the arcuate portion, with the arcuate portion having a diameter substantially less than the diameter of the first portion.

5. The expandable microwave package of claim 2 wherein the fourth portion includes fifth and sixth portions extending from the second and third portions at an obtuse angle toward each other.

6. The expandable microwave package of claim 2 wherein the first portion includes a portion being V-shaped between and parallel to the closure portion and the wall and having first and second legs interconnected at first ends at a juncture with the first and second legs extending at a nonparallel angle from the juncture, with a bisector of the nonparallel angle of the first and second legs extending in line with the major axis of the generally oval shape and the juncture located on the bisector.

7. The expandable microwave package of claim 2 with the wet seal adhesive being applied as a plurality of spaced, parallel bands, with the bands defining a plurality of spaced, parallel spaces therebetween creating a tortuous path for resisting any leakage from the interior of the bag through the seal.

8. Expandable microwave package for holding a food product for popping, puffing or expanding in a microwave oven comprising, in combination: a bag having an interior for holding a charge of food product to be subjected to microwave energy and having a wall including an access opening, with the bag further including a closure portion having an outer periphery of a size greater than the access opening, with the bag including a seal between the closure portion and the wall around the access opening, with the bag expanding into an expanded condition, with the seal being formed by a plurality of spaced, parallel bands defining a plurality of spaced, parallel spaces therebetween creating a tortuous path for resisting any leakage from the interior of the bag through the seal.

9. The expandable microwave package of claim 8 wherein the seal includes a portion being V-shaped between and parallel to the closure portion and the wall having first and second legs interconnected at first ends at a juncture with the first and second legs extending at a nonparallel angle relative to each other from the juncture, with a bisector of the nonparallel angle of the first and second legs extending in line with the major axis of the generally oval shape and the juncture located on the bisector.

10. The expandable microwave package of claim 9 with the seal being formed of wet seal adhesive.

11. The expandable microwave package of claims 10 with the seal being generally oval in shape and having a major axis and a minor axis, with the seal including a first, generally semicircular, portion of a diameter generally equal to the minor axis of the generally oval shape, with the seal including second and third portions extending from the first portion and generally parallel to the major axis, with the seal further including a fourth portion extending from and interconnecting the second and third portions, with the first portion including the V-shaped portion.

12. The expandable microwave package of claims 11 wherein the access opening and the outer periphery of the closure portion are generally oval in shape.

13. The expandable microwave package of claim 12 further comprising, in combination: an extension formed on the outer periphery of the closure portion outward of the seal.

14. The expandable microwave package of claim 13 wherein the extension extends in line with the major axis of the generally oval shape.

15. Container for holding a food product to be subjected to microwave energy in a microwave oven comprising, in combination: a package having an interior for holding a charge of food product to be subjected to microwave energy and including a first wall and a second wall, with the first and second walls being interconnected at a seal, with the first wall including a peel element creating a reduced strength area in the first wall, with the peel element allowing the first wall to fail and peel from the second wall for accessing the interior holding the food product without requiring the failure of the seal, with the seal overlaying the peel element.

16. The container of claims 15 with the seal being formed by a plurality of spaced, parallel bands defining a plurality of spaced, parallel spaces therebetween creating a tortuous path for resisting any leakage from the interior of the package through the seal.

17. A container for holding a food product to be subjected to microwave energy in a microwave oven comprising, in combination: a package having an interior for holding a charge of food product to be subjected to microwave energy and including a first wall and a second wall, with the first and second walls being interconnected at a seal, with the first wall including a peel element allowing the first wall to peel from the second wall without requiring the failure of the seal, with the seal overlaying the peel element, wherein the first wall is formed from a first laminate and a second laminate adhered together to form a single layer, with the peel element being a pattern between the first and second laminates which is not adhered together.

18. The container of claim 17 wherein one of the first and second walls includes an access opening to the interior of the package, with the seal located around the access opening such that the other of the first and second walls closes the access opening.

19. The container of claim 18 wherein the first wall is formed of flexible material.

20. The container of claim 19 wherein the second wall is formed of flexible material, with the first and second walls being non-extendable, with the package being in the form of a bag.

21. The container of claim 20 wherein the seal is formed from a wet seal adhesive.

22. Container for holding a food product to be subjected to microwave energy in a microwave oven comprising, in combination: a package having an interior for holding a charge of food product to be subjected to microwave energy, with the package including a first wall; with the package further having a chamber in communication with the interior, with the chamber defined by the first wall; and a vent opening formed in the first wall and from the chamber to the outside of the interior of the bag, wherein pressure is released from the interior of the package through the chamber and through the vent opening in the first wall.

23. The container of claim 22 wherein the package comprises a bag including the first wall and a second wall, with the first and second walls each formed of a sheet of flexible material, with the first and second walls being interconnected at a seal, with the seal being divided at a vent location into a first seal portion and a second seal portion, with the chamber being defined by the first and second walls and the first and second seal portions, with the second seal portion located inwardly of the first seal portion, with communication of the chamber with the interior being through the second seal portion.

24. The container of claim 23 wherein the vent opening is located inwardly of the first seal portion.

25. The container of claim 24 wherein the vent opening is in the form of a slit cut in the first wall.

26. The container of claim 25 further comprising, in combination: means for preventing release of pressure until the pressure in the interior of the package reaches an inflated pressure level.

27. The container of claim 26 wherein the pressure release preventing means comprises a seal for the communication of the chamber with the interior, with the seal being removed at the inflated pressure level.

28. The container of claim 27 wherein the seal includes a V-shaped seal portion having first and second legs interconnected at first ends at a juncture with the

first and second legs extending at a non-parallel angle from the juncture, with the juncture located in the interior of the package, with the V-shaped seal portion being primarily subjected to tensile stress when the charge of food product is subjected to microwave energy.

29. Expandable microwave package for holding a food product for popping, puffing, or expanding in a microwave oven comprising, in combination: a bag having an interior for holding a charge of food product to be subjected to microwave energy and including a first wall and a second wall, with the first and second walls each formed of a sheet of flexible material, with the first and second walls being interconnected at a seal, with the seal including a first seal portion being V-shaped between and parallel to the first and second walls and having first and second legs interconnected at first ends at a juncture with the first and second legs extending at a non-parallel angle relative to each other from the juncture, with the seal being subjected to tensile stress, with the interconnection of the first and second walls being removed by the tensile stress initially placed on the juncture and then moved down the legs away from the juncture of the first, V-shaped, seal portion.

30. The expandable microwave package of claim 29 wherein the juncture is located in the interior of the bag inward of the remaining portions of the seal, with the tensile stress being subjected to the seal by the expansion of the bag as the result of popping, puffing or expanding of the food product in the interior of the bag, with the removal of the interconnection allowing release of pressure from the interior of the bag during the popping, puffing or expanding of the food product in the interior of the bag.

31. The expandable microwave package of claim 30 wherein the seal includes a second seal portion, with a chamber being defined by the first and second walls and the first and second seal portions, with the juncture located outside of the chamber, with the removal of the interconnection allowing release of pressure from the interior of the bag into the chamber.

32. The expandable microwave package of claim 31 further comprising, in combination: a vent opening formed in the first wall and from the chamber to outside of the interior of the bag, with the vent opening allowing release of pressure from the chamber to outside of the interior of the bag and not directly from the interior of the bag.

33. The expandable microwave package of claim 32 wherein the vent opening is formed by a slit in the first wall.

34. The expandable microwave package of claim 33 wherein the first and second walls each include an outer periphery portion, with the outer periphery portions of the first and second walls being interconnected at the seal and puckering as the bag expands, with the first wall forming the top when the charge of food product in the interior of the bag is subjected to microwave energy, with the vent opening being spaced from the outer periphery portion of the first wall.

35. The expandable microwave package of claim 34 wherein the seal is formed from adhesive which is activated by the application of heat and/or pressure.

36. The expandable microwave package of claims 30 with at least one of the first and second walls including at least a first extension extending outwardly from the interior of the bag, with the first, V-shaped, seal portion located as circumferentially remote from the first extension as possible.

37. The expandable microwave package of claim 36 with a second extension being included diametrically opposite the first extension, with the first, V-shaped, seal portion being located 90° between the first and second extensions.

38. The expandable microwave package of claim 29 wherein the seal is primarily subjected to shear stress as the result of popping, puffing or expanding of the food product in the bag, with the first wall including an access opening, with the seal located around the access opening such that the second wall closes the access opening.

39. The expandable microwave package of claim 38 wherein the second wall includes an extension extending along a bisector of the non-parallel angle of the first and second legs and in a direction opposite to the direction that the first and second legs extend from the juncture.

40. The expandable microwave package of claim 39 wherein the seal is annular in configuration.

41. The expandable microwave package of claim 40 wherein the seal is formed from wet seal adhesive which does not vent when the charge of food product held in the interior of the bag is subjected to microwave energy.

42. The expandable microwave package of claim 38 with the seal being formed by a plurality of spaced, parallel bands defining a plurality of spaced, parallel

spaces therebetween creating a tortuous path for resisting any leakage from the interior of the bag through the seal.

43. Expandable microwave package for holding a food product for popping, puffing, or expanding in a microwave oven comprising, in combination: a bag having an interior for holding a charge of food product to be subjected to microwave energy and including a first wall and a second wall, with the bag holding the food product before being subjected to microwave energy having a collapsed condition with the first wall overlaying the second wall and with the bag having an expanded condition after the food product is subjected to microwave energy, with the interior being at least partially defined by the first and second walls in the collapsed condition and in the expanded condition; a vent opening formed in one of the first and second walls; and a seal bonding the first and second walls together, with the vent opening located within the seal, with the seal and the first and second walls preventing communication with the interior through the vent opening before the food product is subjected to microwave energy, with the seal at least partially releasing bonding of the first and second walls allowing communication with the interior through the vent opening while the food product is subjected to microwave energy.

44. The expandable microwave package of claim 43 with the first and second walls each having a periphery, with the peripheries of the first and second walls being connected together by the seal.

45. The expandable microwave package of claim 44 with the seal being divided at a vent location into a first seal portion and a second seal portion, with a chamber being defined by the first and second walls and the first and second seal portions, with the second seal portion located inwardly of the first seal portion, with communication of the chamber with the interior being through the second seal portion, with the vent opening formed in the chamber, wherein pressure is released from the interior of the package through the chamber and through the vent opening.